

RECEIVED  
CENTRAL FAX CENTER

U.S.S.N. 09/661,967

7

OCT 10 2006

PD-200108

REMARKS

Applicants wish to thank the Examiner for considering the present application. In the Office Action dated August 30, 2006, claims 1-26 are pending in the application. Applicants respectfully request the Examiner to reconsider the rejection.

Claims 1, 8-14, 18 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ibanez-Meier (6,151,308) in view of Kavehrad (4,577,330). Applicants respectfully traverse.

Claim 1 is directed to a communication system (10) that is generally illustrated in Fig. 1 and is described on pages 5-7. The communication system (10) includes a stratospheric platform (18) having a payload controller and a phased array antenna having a plurality of elements for generating a first beam and a second beam. A gateway station (20) in communication with said stratospheric platform (18) receives a first signal having a first beam having interference from the second beam therein and a second signal having a second beam having interference from the first beam therein. As is best shown in Figure 3 and the corresponding text on pages 9-10, the gateway station (20) includes a first subtracting block (74) for subtracting the second signal from the first signal to obtain the first beam and a second subtracting block (76) for subtracting the first signal from the second signal to obtain a second beam. One point to note is that only two signals are received to form two beams.

The *Ibanez-Meier* reference teaches stratospheric platforms and satellites at various altitude levels. A user may receive signals from two different sources. The system relies on spatial diversity to prevent interference. As the *Ibanez-Meier* reference implies, when two signal sources become colinear or near colinear, interference between the signals may result in unacceptable signal degradation. As stated beginning in Col. 16, line 61, signal degradation may

U.S.S.N. 09/661,967

8

PD-200108

be remedied by ceasing to communicate over one of the links in which degradation is present or switching to another link. This highlights the spatial diversity aspect for resolving interference. No teaching or suggestion is provided for subtracting signals as in the present invention.

The *Kavehrad* reference is cited for teaching a first subtracting block and a second subtracting block. The *Kavehrad* reference is not directed to a receiver in a gateway station. A suggested use of the *Kavehrad* system is line-of-sight terrestrial radio applications (Col. 2, line 68). Applicants therefore respectfully request the Examiner to reconsider this rejection as well since the *Kavehrad* reference does not teach a gateway station that is in communication with a stratospheric platform. The *Kavehrad* reference also does not teach that the gateway station receives a first signal having a first beam having interference from the second beam therein and receiving a second signal having the second beam having interference from the first beam therein wherein the gateway station has a first subtracting block and a second subtracting block for subtracting the second signal from the first signal and the first signal from the second signal, respectively.

In response to the above arguments, the Office Action of August 30, 2006, states that the *Ibanez-Meier* reference teaches a gateway station in communication with the stratospheric platform and not the *Kavehrad* reference. The Examiner then states that the combination of the *Ibanez-Meier* and *Kavehrad* references teaches the claimed invention. The Examiner then states "the combination of the *Ibanez-Meier* or *Kavehrad* references does not specifically disclose the gateway station comprising a first subtracting block in a second subtracting block. However, *Kavehrad* differs from the claims in that the above operations are done in the satellite ... not in the gateway station as recited in the claim." Applicants can find no teaching or suggestion for the Examiner's statement that the *Kavehrad* reference teaches this specific use. The Examiner

U.S.S.N. 09/661,967

9

PD-200108

points to column 1, lines 20-21, for teaching a satellite system. However, this passage is in the Background and merely recites that the bandwidth efficiency of a terrestrial or satellite radio may be doubled using frequency reuse via orthogonally polarized channels. Applicants submit that the suggested use of the *Kavehrad* reference is line-of-site terrestrial radio applications as stated in the last line of column 2. Even if the *Kavehrad* reference is suitable for satellite operations, no teaching or suggestion is set forth for implementing such a system in a gateway station as set forth in the claims of the present application. This was the purpose of the Applicants' remarks that were commented on by the Examiner on page 2 of the August 30, 2006, Office Action. The *Ibanez-Meier* reference merely teaches a stratospheric platform and satellite system. Neither reference contains a teaching or suggestion for making the combination. The above-stated differences attack the Examiner's motivation for making the combination, not for individually attacking the references.

Applicants therefore respectfully request the Examiner to reconsider the rejection of Claim 1.

Claims 8-13 depend from Claim 1 and are believed to be allowable for at least the same reasons set forth above.

Claim 14 is a method claim that recites receiving a first signal having a first beam having interference from a second beam therein at a gateway station receiving a second signal having a second beam having interference from the first beam, subtracting the second signal from the first signal to obtain the first beam, and subtracting the first signal from the second signal to obtain the second beam. It is clear that this also refers to receiving signals and not transmitting signals. Therefore, the *Ibanez-Meier* and *Kavehrad* references also do not teach or suggest the elements set forth in Claim 14.

U.S.S.N. 09/661,967

10

PD-200108

Claim 20 is also an independent claim and describes receiving a plurality of signals. Thus, Claim 20 is directed to a receiving configuration in a similar manner to that of Claims 1 and 14. Therefore, Claim 20 is also believed to be allowable for the same reasons set forth above.

Claims 5-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Ibanez-Meier* in view of *Kavehrad* in further view of *Rouffet* (5,410,731).

Claims 5-7 are dependent upon Claim 1. The *Rouffet* reference also does not teach or suggest the elements missing from Claim 1. That is, the *Rouffet* reference also does not teach or suggest subtracting using the receiving signals in a gateway station. Applicants therefore respectfully request the Examiner to reconsider the rejection of Claims 5-7.

Claims 2-4, 15-17, 19 and 21-26 stand rejected as being unpatentable over *Ibanez-Meier* in view of *Kavehrad* in further view of *Baier* (6,519,477). Applicants respectfully traverse. Claims 2 and 3 depend on Claim 1. Claim 4 specifically sets for the first weight is a function of user position files. The Examiner points to column 8, lines 57-67 of the *Baier* reference for this teaching and states the "user position file is inherently implied". Although weights are described, no mention of the user or user positions is described. Applicants can find no teaching or suggestion for this proposition for weight being a function of user positions. Claims 15-17 are dependent upon Claim 14 and Claims 21-24 depend from Claim 20. The *Baier* reference also does not teach or suggest the subtracting blocks of a received signal.

Claims 25 and 26 each describe that the weights are a function of the user position file. Applicants can find no teaching or suggestion in the *Ibanez-Meier*, the *Kavehrad* or the *Baier* references of weights being a function of a user position file.

U.S.S.N. 09/661,967

11

RECEIVED  
CENTRAL FAX CENTER  
OCT 10 2006

PD-200108

Applicants therefore respectfully request the Examiner to reconsider the rejection of these claims as well.

**CONCLUSION**

In light of the above remarks, Applicants submit that all rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Should any fees be associated with this submission, please charge Deposit Account 50-0383.

Respectfully submitted,

Dated: October 10, 2006

By: 

Georgann S. Grunebach, Reg. No. 33,179  
Attorney for Applicants

The DIRECTV Group, Inc.  
CA/LA1/A109  
2230 East Imperial Highway  
P.O. Box 956  
El Segundo, CA 90245  
Telephone: (310) 964-4615